WHAT IS CLAIMED IS

1. An organic electro-luminescent (EL) device with efficient heat dissipation, comprising:

a substrate;

a plurality of first electrodes formed on said substrate, wherein each of a plurality of openings is formed between two of said first electrodes;

a plurality of conductive heat-dissipation layers formed filling said openings, each of said conductive heat-dissipation layers contacting edge portions of two of said first electrodes;

a plurality of organic layers formed of an organic EL material to cross said first electrodes partially; and

at least a second electrode formed on said organic layers.

2. The organic EL device as recited in claim 1, wherein each of said conductive heat-dissipation layers overlaps said edge portions of two sides of said first electrodes.

3. The organic EL device as recited in claim 1, wherein each of said organic layers overlaps edge portions of two sides of said conductive heat-dissipation layers.

4. The organic EL device as recited in claim 1, wherein said conductive heat-dissipation layers are formed of a conductive heat-dissipation material with excellent electrical conductivity and heat dissipation.

5. The organic EL device as recited in claim 1, further comprising a dielectric insulating layer formed on each of said conductive heat-dissipation layers.

6. A method for manufacturing an organic EL device, comprising steps of:

a. forming at least a first electrode on a substrate;

b. forming a plurality of openings by etching portions of said first electrode, whereby said first electrode turns into a plurality of first electrodes;

c. filling said openings with a plurality of conductive heat-dissipation layers consisting of a conductive heat-dissipation material with excellent electrical conductivity and heat dissipation, each of said conductive heat-dissipation layers contacting edge portions of two sides of said first electrodes;

d. forming a plurality of organic layers to cross said first electrodes partially uncovered by said conductive heat-dissipation layers; and

e. forming at least a second electrode on said organic layers.

7. The method as recited in claim 6, wherein each of said conductive heat-dissipation layers overlaps said edge portions of two sides of said first electrodes.

8. The method as recited in claim 6, wherein each of said organic layers overlaps edge portions of two sides of said conductive heat-dissipation layers.

9. The method as recited in claim 6, wherein said step c. further comprises steps of:

forming a dielectric insulating layer on each of said conductive heat-dissipation layers and said first electrodes; and

removing by etching said dielectric insulating layer on each of said first electrodes, remaining said dielectric insulating layer on each of said conductive heat-dissipation layers.

10. A method for manufacturing an organic EL device, comprising steps of:

a. forming a plurality of first electrodes on a substrate;

b. forming a plurality of organic layers to cross said first electrodes partially;

c. forming at least a second electrode on said organic layers;

d. forming a plurality of openings by etching said first electrodes uncovered by said organic layers; and

e. filling said openings with a plurality of conductive heat-dissipation layers having excellent electrical conductivity and heat dissipation, each of said conductive heat-dissipation layers contacting edge portions of two sides of said first electrodes.